

# Spacecraft Status

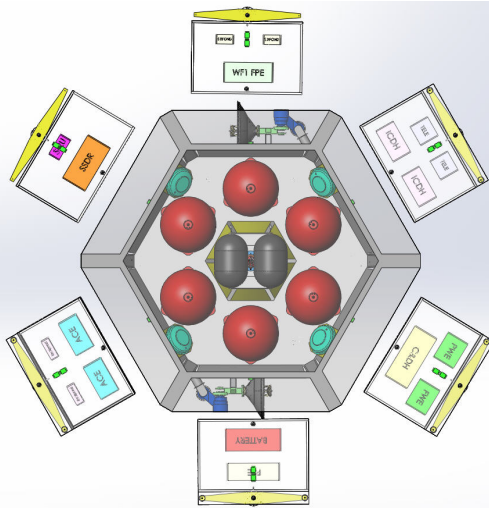


- The WFIRST-AFTA Study Office has been developing an alternate spacecraft configuration at a low level of effort over the last couple of months
  - The alternate configuration would eliminate the bi-prop system, significantly simplifying the spacecraft and reducing overall mass, but requires the launch vehicle to circularize the orbit at GEO.
- The launch vehicle market is very dynamic. SpaceX is planning on launching a demo flight of the new Falcon Heavy this year and has an Air Force contract for the Falcon Heavy for 2015.
  - The Falcon Heavy will have the largest lift capacity of any vehicle available today and at a potentially lower cost than the Atlas V.
  - SpaceX is planning on starting the “on-ramp” process this year to make the Falcon Heavy available to NASA missions.

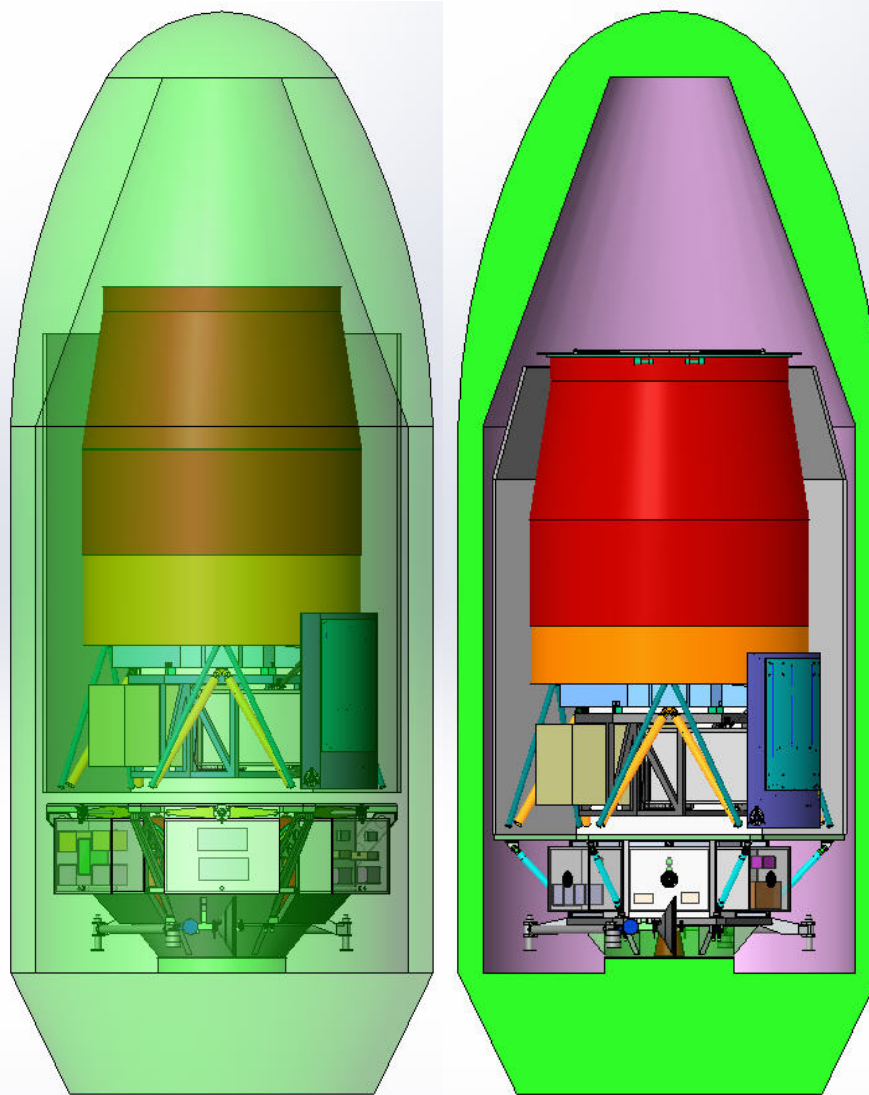
# Spacecraft Configurations

## Baseline Configuration

- 6 prop tanks carry >3000 kg of bi-prop to circularize orbit from GTO and for station keeping
- Taller S/C to accommodate tanks pushes higher into fairing
- Atlas V 551

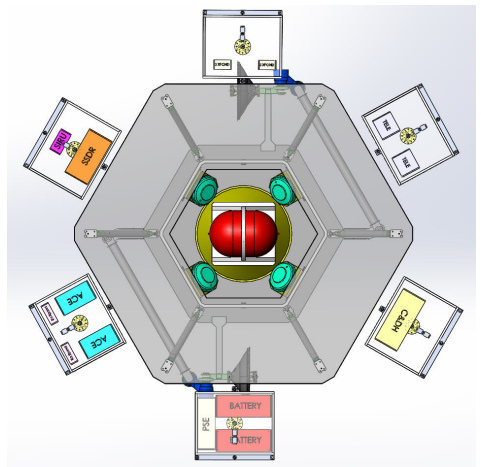


Top View and View in Fairing of Baseline Configuration



## Alternate Configuration

- 1 prop tank carries <100 kg of mono prop for station keeping
- Shorter S/C is lower in fairing
- Falcon Heavy (or Delta IV Heavy)



Top View and View in Fairing of Alternate Configuration